

AMENDMENTS TO THE CLAIMS

Kindly amend Claims 1, 3, 8, 11, 24, 29, 32, 36, and 37 as follows.

1(currently amended). A wheel assembly, ~~for use in an endless track drive system,~~
~~said wheel assembly~~ comprising:

- (a) a tire comprising a tire body comprising elastomeric material, said tire body further comprising
 - a tire exterior, said tire exterior comprising an inner surface, an outer surface, first and second respective tire body side surfaces extending generally from the outer surface toward the inner surface, and first and second recesses in the exterior of said tire body between the inner surface and respective ones of the tire body side surfaces, the first and second recesses each defining respective a side-facing recess surfaces ~~surface~~ thereof;
- (b) a wheel comprising
 - (i) an inner flange defining a central opening for mounting said wheel about an axis of rotation of said wheel assembly ~~on such axle,~~
 - (ii) an outer flange having first and second opposing sides, and an outer surface corresponding to an outer surface of said wheel, the outer surface of said wheel receiving the inner surface of said tire thereon at a wheel-tire interface, ~~the inner surface of said tire and the outer surface of said wheel being cooperatively sized and configured such that said tire can be mounted on said wheel with a snug fit,~~
 - the outer surface of said outer flange comprising a first lesser diameter portion extending from the first side of said wheel toward the second opposing side, said lesser diameter portion having a first lesser diameter, the outer surface of said wheel further comprising a second greater diameter portion, comprising a first side flange at the second side of, and integral with, said outer flange of said wheel, said first side flange extending outwardly of the minimum diameter portion

of the outer surface of said outer flange, and comprising a first abutment surface facing toward a center of the outer surface and abutting the side-facing recess surface of the first recess in the exterior of said tire, a first flange outer surface of said first side flange being disposed at a first distal location from the axis of rotation of said wheel assembly, and a first side flange side surface generally opposite the first abutment surface, and

(iii) ~~a web connecting said inner flange to said outer flange, said web being integral with said outer flange such that said web, said outer flange, and said side flange comprise a unitary structure; and~~

(c) as a separate and distinct element, a second side flange disposed against the first side of said outer flange and comprising a second abutment surface facing toward the center of the outer surface of said the outer flange, a second flange outer surface of said second side flange being disposed at a second distal location from the axis of rotation of said wheel assembly, and a second side flange side surface generally opposite the second abutment surface, said second side flange being removably mounted to said wheel, the second abutment surface abutting the side-facing recess surface of the second recess in the exterior of said tire,

the entireties of the first and second side flange outer surfaces interfacing with the inner surface of said tire, the first tire body side surface and the first side flange side surface extending in a first common plane generally perpendicular to the axis of rotation of said wheel assembly, the second tire body side surface and the second side flange side surface extending in a second common plane generally perpendicular to the axis of rotation of said wheel assembly,

a width of said tire at the outer surface of said tire is approximately equal to a width of said wheel at the outer surface of said wheel, including a width (W2) plus any incremental width of said wheel added by said second side flange at the second side flange outer surface proximate the outer surface of said outer flange.

2(previously amended). A wheel assembly as in Claim 1, further comprising a plurality of steel cables proximate the inner surface of said tire body, embedded in and surrounded by said elastomeric material.

3 (currently amended). A wheel assembly as in Claim 1, said wheel assembly comprising an outer surface thereof, which is most remote ~~directed away~~ from the axis of rotation of said wheel assembly, the outer surface of said tire being that portion of said tire which is most remote ~~directed away~~ from the axis of rotation of said wheel assembly, and wherein the outer surface of the tire defines the entirety of the ~~an~~ outer surface of said wheel assembly which is most remote ~~directed away~~ from the axis of rotation of said wheel assembly.

4 (previously amended). A wheel assembly as in Claim 1, said wheel assembly being free from fasteners passing therethrough for affixation of said tire to said wheel.

5(original). A wheel assembly as in Claim 1, said wheel assembly being free from adhesive at the wheel-tire interface.

6(original). A wheel assembly as in Claim 1, said second side flange comprising an annular body having apertures therein, receiving fasteners removably affixing said annular body to the first side of said outer flange, and an annular leg extending from said annular body toward a central portion of the outer surface of said outer flange, between the outer surface of said outer flange and the inner surface of said elastomeric tire at the second recess.

7 (previously amended). A wheel assembly as in Claim 1, the second side flange being mounted to said outer flange of said wheel by fasteners extending through apertures in said second side flange and into, and terminating in, the first side of said outer flange.

8(currently amended). A wheel assembly as in Claim 1, said first side edge of said wheel comprising blind apertures for receiving therein mounting bolts and thereby affixing said second side flange to said outer flange ~~hub~~.

9(previously amended). A wheel assembly as in Claim 1, the lesser diameter portion extending along at least 60 percent of the width of said wheel between the first and second sides.

10(original). A wheel assembly as in Claim 1, the lesser diameter portion extending along at least 80 percent of the width of said wheel between the first and second sides.

11(currently amended). A wheel assembly, comprising:

(a) a tire comprising a tire body comprising elastomeric material, said tire body further comprising

a tire exterior, said tire exterior comprising an inner surface, an outer surface, first and second respective side surfaces extending generally from the outer surface toward the inner surface, and first and second recesses in the exterior of said tire body between the inner surface and respective ones of the side surfaces, the first and second recesses each defining a side-facing recess surface thereof;

(b) a wheel comprising

(i) an inner flange defining a central opening for mounting said wheel about to an axis of rotation of said wheel on such axle,

(ii) an outer flange having first and second opposing sides, and an outer surface corresponding to an outer surface of said wheel, the outer surface of said wheel receiving the inner surface of said tire thereon at a wheel-tire interface, the inner surface of said tire and the outer surface of said wheel being cooperatively sized and configured such that said tire can be mounted on said wheel with a snug fit,

the outer surface of said outer flange comprising a first lesser diameter portion extending from the first side of said wheel toward the second opposing side, said lesser diameter portion having a first lesser diameter, the outer surface of said wheel further comprising a second greater diameter portion, comprising a first side flange at the second side of, and integral with, said outer flange of said wheel, said first side flange extending outwardly of the minimum diameter portion of the outer surface of said outer flange, and comprising a first abutment surface facing toward a center of the outer surface and abutting the side-facing recess surface of the first recess in the exterior of said tire, and

(iii) a web connecting said inner flange to said outer flange, said web being integral with said outer flange such that said web, said outer flange, and said side flange comprise a unitary structure; and

(c) as a separate and distinct element, a second side flange disposed against the first side of said outer flange and comprising a second abutment surface facing toward the center of the outer surface of the outer flange, said second side flange being removably mounted to said outer flange of said wheel, the second abutment surface abutting the side-facing recess surface of the second recess in the exterior of said tire as in Claim 4,

said the lesser diameter portion of the outer surface of said outer flange having a relatively greater first width between a center-line, extending through and centered along said web perpendicular to said lesser diameter portion, and a first side of the lesser diameter portion, which is disposed toward the first side of said outer flange, and a relatively lesser second

width between the center-line and a second side of the lesser diameter portion of the outer surface, which is disposed toward the second side of said outer flange.

12(previously amended). A wheel assembly as in Claim 11, the width of the combination of the second width of the lesser diameter portion and a width of the first side flange being approximately equal to the first width of the lesser diameter portion.

13(original). A wheel assembly as in Claim 1 wherein the elastomeric material in said elastomeric tire comprises a rubber compound.

14(previously amended). A wheel assembly as in Claim 1 wherein said first and second abutment surfaces form angles α , with the lesser diameter portion of the outer surface of said outer flange, a leg of each said angle α being disposed between the respective abutment surface and the center of the outer surface of said outer flange, at an angle of no more than about 135 degrees with the respective abutment surface.

15(previously amended). A wheel assembly as in Claim 1 wherein said first and second abutment surfaces form angles α , with the lesser diameter portion of the outer surface of said outer flange, a leg of each said angle α being disposed between the respective abutment surface and the center of the outer surface of said outer flange, at an angle of at least about 75 degrees to 135 degrees with the respective abutment surface.

16(original). An endless track drive system, said drive system comprising a prime mover, an endless track mounted about a plurality of wheels, and a drive train transferring drive power from the prime mover to at least one of the wheels, at least one of the plurality of wheels comprising a wheel assembly of Claim 1.

17(original). An endless track drive system, said drive system comprising a prime mover, an endless track mounted about a plurality of wheels, and a drive train transferring drive power from the prime mover to at least one of the wheels, at least one of the plurality of wheels comprising a wheel assembly of Claim 6.

18(original). A tracked vehicle comprising a frame, a prime mover, a track assembly, and a drive train transferring drive power from the prime mover to the track assembly, said track assembly comprising an endless track and a plurality of wheels about which said endless track is mounted, at least one of said wheels comprising a wheel assembly of Claim 1.

19(original). A tracked vehicle comprising a frame, a prime mover, a track assembly, and a drive train transferring drive power from the prime mover to the track assembly, said track assembly comprising an endless track and a plurality of wheels about which said endless track is mounted, at least one of said wheels comprising a wheel assembly of Claim 6.

20(original). A tracked vehicle as in Claim 18 wherein said wheel assembly is a mid-wheel roller.

21(original). A tracked vehicle as in Claim 18 wherein said wheel assembly is a leading idler wheel.

22(original). A tracked vehicle as in Claim 19 wherein said wheel assembly is a mid-wheel roller.

23(original). A tracked vehicle as in Claim 19 wherein said wheel assembly is a leading idler wheel.

24(currently amended). A wheel assembly, ~~for use in an endless track drive system,~~
~~said wheel assembly~~ comprising:

- (a) a tire comprising a tire body comprising elastomeric material, said tire body further comprising
 - a tire exterior, said tire exterior comprising an inner surface, an outer surface, first and second respective tire body side surfaces extending generally from the outer surface toward the inner surface, and at least one a recess in the exterior of said tire body and associated with the inner surface and one of the first and second tire body side surfaces, the at least one recess defining a side-facing recess surface thereof;
- (b) a wheel comprising
 - (i) an inner flange defining a central opening for mounting said wheel about an axis of rotation of said wheel assembly,
 - (ii) an outer flange having first and second opposing sides, and an outer surface having a minimum diameter portion and corresponding to an outer surface of said wheel, the outer surface of said wheel receiving the inner surface of said tire thereon at a wheel-tire interface, ~~the inner surface of said tire and the outer surface of said wheel being cooperatively sized and configured such that said tire can be mounted on said wheel with a snug fit,~~ and
 - (iii) a web connecting said inner flange to said outer flange;
- (c) a first side flange at the first side of the outer flange, said first side flange extending outwardly of the minimum diameter portion of the outer surface of said outer flange, said first side flange comprising a first abutment surface facing toward a center of the outer surface of said the outer flange, and abutting a side-facing surface of said tire; and
- (d) as a separate and distinct element, a second side flange disposed against the second side of said outer flange and comprising a second abutment surface facing toward the center of the outer surface of said the outer flange, said second side flange being removably mounted to said wheel by at least

one fastener mounted to said outer flange of said wheel, the second abutment surface abutting the side-facing recess surface of the recess in the exterior of said tire,

said tire being removably mounted to said wheel at a tire-wheel interface,

said second side flange extending laterally inwardly from proximate the second side of said outer flange toward the center of the outer surface of said outer flange, and being in surface-to-surface contact with the outer surface of said outer flange at a portion of said outer surface which is generally parallel to the axis of rotation of said wheel assembly,

such that said second side flange is interposed between a side portion of the inner surface of said tire and a side portion of the outer surface of said outer flange, ~~at least one of the first and second side surfaces of said tire extending in a direction corresponding to a direction of extension of a side surface of a respective one of said first and second side flanges.~~

25(previously added). A wheel assembly as in Claim 24 wherein said inner flange, said outer flange, and said web comprise a single unitary structure.

26(previously added). A wheel assembly as in Claim 24 wherein said first side flange is a separate element, distinct from said inner flange, distinct from said outer flange, and distinct from said web.

27(previously added). A wheel assembly as in Claim 24, said wheel assembly being free from fasteners passing therethrough and affixing said tire to said wheel.

28(previously added). A wheel assembly as in Claim 24, the second side flange being mounted to said outer flange of said wheel by fasteners extending through apertures in said second side flange and into, and terminating in, the first side of said outer flange.

29(currently amended). A wheel assembly as in Claim 24, a plurality of cables being disposed proximate the inner surface of said tire body, and being embedded in and

surrounded by said elastomeric material, each of said side flanges having an outer surface thereof, outwardly displaced ~~directed away from said~~ axis of rotation ~~inner flange of said~~ wheel, said cables being defined by cable material having a longitudinal axis, and arranged in a straight-line array.

30(previously added). An endless track drive system, said drive system comprising a prime mover, an endless track mounted about a plurality of wheels, and a drive train transferring drive power from the prime mover to at least one of the wheels, at least one of the plurality of wheels comprising a wheel assembly of Claim 24.

31(previously added). A tracked vehicle comprising a frame, a prime mover, a track assembly, and a drive train transferring drive power from the prime mover to the track assembly, said track assembly comprising an endless track and a plurality of wheels about which said endless track is mounted, at least one of said wheels comprising a wheel assembly of Claim 24.

32(currently amended). A wheel assembly, ~~for use in an endless track drive system,~~
~~said wheel assembly~~ comprising:

- (a) a tire comprising a tire body comprising elastomeric material, said tire body further comprising a tire exterior, said tire exterior comprising an inner surface, an outer surface, first and second respective tire body side surfaces extending generally from the outer surface toward the inner surface, and at least a first recess in the exterior of said tire body and associated with the joiner of the inner surface and one of the first and second tire body side surfaces, the at least one recess defining a side-facing recess surface thereof;
- (b) a wheel comprising
 - (i) an inner flange defining a central opening for mounting said wheel about an axis of rotation of said wheel assembly,
 - (ii) an outer flange having first and second opposing sides, an outer surface corresponding to an outer surface of said wheel and being parallel to the axis of rotation of said wheel assembly, a first portion of the outer surface of said wheel defining a minimum diameter portion

of the outer surface, the outer surface of said wheel receiving the inner surface of said tire thereon at a wheel-tire interface, ~~the inner surface of said tire and the outer surface of said wheel being cooperatively sized and configured such that said tire can be mounted on said wheel with a snug fit,~~

a first side flange at the first side of said outer flange extending outwardly of the minimum diameter portion of the outer surface of said outer flange, said first side flange comprising a first abutment surface facing toward a center of the outer surface, and

(iii) a web connecting said inner flange to said outer flange; and

- (c) as a separate and distinct element, a second side flange disposed against the second side of said outer flange and comprising a second abutment surface facing toward the center of the outer surface of the outer flange, and an interface surface following a contour of the outer surface of said outer flange, said second side flange being removably mounted to said outer flange of said wheel,

one of the first and second abutment surfaces, of respective said first and second side flanges, abutting the at least one side-facing recess surface of said tire at a first tire-flange interface surface which is generally perpendicular to the axis of rotation of said wheel assembly, the other of the abutment surfaces abutting a second side-facing surface of said tire at a second tire-flange interface surface which is generally perpendicular to the axis of rotation of said wheel assembly.

33(previously added). A wheel assembly as in Claim 32 wherein said inner flange, said outer flange, and said web comprise a single unitary structure.

34(previously added). A wheel assembly as in Claim 32, said wheel assembly being free from fasteners passing therethrough and affixing said tire to said wheel.

35(previously added). A wheel assembly as in Claim 32, the second side flange being mounted to said outer flange of said wheel by fasteners extending through apertures in said second side flange and into, and terminating in, the first side of said outer flange.

36(currently amended). A wheel assembly as in Claim 32, each of said side flanges having an outer surface thereof, directed away from said outer flange of said wheel, a plurality of cables being disposed proximate the inner surface of said tire body, and being embedded in and surrounded by said elastomeric material, said cables being defined by cable material having a longitudinal axis, and a diameter, the diameter of the cable material being sufficiently small that the longitudinal axis of the cable material in said tire is below the outer surfaces of the side flanges.

37(currently amended). A wheel assembly as in Claim 1, each of said side flanges having an outer surface thereof, outwardly displaced ~~directed away from said axis of rotation~~ outer flange of said wheel, a plurality of cables being disposed proximate the inner surface of said tire body, and being embedded in and surrounded by said elastomeric material, said cables being defined by cable material having a longitudinal axis, and a diameter, the diameter of the cable material being sufficiently small that the longitudinal axis of the cable material in said tire is below the outer surfaces of the side flanges.